



Customer Name:	U.S. Micro-Solutions, Inc.	Sample Date:	March 17, 2022
Customer Address:	302 Unity Plaza Latrobe, PA 15650	Date Received:	March 18, 2022
		Date of Report:	March 25, 2022
Customer Phone:	(724) 853-4047	Fax:	(724) 853-4049
PO Number:		Attention:	
		Analysis Date:	March 18, 2022
Project Name/Number:	Legionella Sample Report (Non-NY)	Sample Time:	1000
		Analysis Time (hrs):	29.3

Customer sample numbers below are uniquely identified by prefixing Laboratory # 12345-22

Water/Liquid Sample(s) for Legionella Culture - Analytical Method MIC 06, MIC 07 (ISO 11731:2017)

Sample Number	Media	Sample Description	Results of Microbial Analysis
1	GPCV	Cooling Tower 1	
AS = 10 CFU/mL (Volume examined: 0.3 mL)			Not Detected
2	GPCV	Cooling Tower 2	
AS = 10 CFU/mL (Volume examined: 0.3 mL)			Positive - 10 CFU/mL Legionella pneumophila Serogroup 2-14
3	BCYE/GPCV	Faucet	
AS = <1 CFU/mL (Volume examined: 100 mL)			Positive - 10 CFU/mL Legionella pneumophila Serogroup 1
4	BCYE/GPCV	Shower	
AS = <1 CFU/mL (Volume examined: 100 mL)			Not Detected

Sample Report

Notes:

CFU/mL = colony forming units per milliliter, AS = analytical sensitivity. Analysis time = time elapsed from sample collection to start of incubation. Results are reported as Positive or Not Detected.

A negative culture for *Legionella* spp. from a sample does not necessarily rule out its presence. Samples are in good condition unless otherwise noted. Results relate only to the samples tested. Results are reported as calculated. For biological data, the first and/or second digit should be considered significant.

When providing duplicates of this report, the document should be provided in total and not in section in accordance with AIHA-LAP, LLC. Any unauthorized or improper disclosure, copying, distribution, use, or falsification of these results is prohibited. USMS shall have no liability to the Customer or the Customer's customer for opinions stated, recommendations made, actions taken, or conduct implemented based on the test results reported.

Technical Manager: Deanna L. Kiska
 Deanna L. Kiska, Ph.D.

Interpretation of Legionella Culture Results

There are no federal action levels for *Legionella*, however some states, agencies, and organizations have published interpretive guidelines for *Legionella* quantitative culture results. The tables below were modified from *Legionella 2019: A Position Statement and Guidance Document* published by the Association of Water Technologies; the full text and additional resources may be accessed at <https://www.awt.org/legionella/>. It is ultimately the responsibility of a qualified professional to select actions that are appropriate for the situation being evaluated.

Legionella Control Programs: Potable Water

Regulatory Authority	Test Frequency	Legionella Concentration (CFU/mL)	Remediation
NY City	No data		No data
NY State*	Every 90 days first year, annually thereafter	<30% positive results of sites tested	Maintain water management plan (WMP).
		≥30% positive results of sites tested	Immediate short-term control levels. Retest. Persistent ≥30% results - institute long-term control levels.
AIHA	2x/year	1-9	Continue monitoring and review WMP.
		10-100	Identify infection source and online disinfection.
		>100	Identify infection source and offline disinfection.

* Regulation addresses covered facilities (general hospitals and residential healthcare facilities)

Legionella Control Programs: Cooling Towers & Evaporative Condensers

Regulatory Authority	Test Frequency	Legionella Concentration (CFU/mL)	Remediation
NY City	At system startup and every 90 days thereafter	<10	Maintain water chemistry and biocide levels.
		≥10 - <100	Online disinfection within 24 hours. Retest.
		≥100 - <1000	Online disinfection within 24 hours. Retest. Review WMP.
		≥1000	Online disinfection within 24 hours. Offline disinfection within 48 hours. Retest. Notify DOH within 24 hours of results.
NY State	At system startup and every 90 days thereafter	<20	Maintain water chemistry and biocide levels.
		≥20 - <1000	Online disinfection immediately. Retest. Review WMP.
		≥1000	Online disinfection immediately. Retest. Review WMP. Any retest >1000 offline disinfection immediately.
AIHA	Monthly	10-99	Review WMP and retest until <10 CFU/mL.
		100-1000	Review WMP and conduct an online disinfection until consistently <10 CFU/mL.
		≥1000	Review WMP and conduct an offline disinfection until consistently <10 CFU/mL.

- NY City: *Chapter 8 (Cooling Towers)* of Title 24 of the Rules of the City of New York (2015)
- NY State: *Protection Against Legionella* (2016)
- AIHA: American Industrial Hygiene Association. *Recognition and Control of Legionella in Building Water Systems* (2015)